

REMARKS

Claims 1-21, 34, 35, and 40-55 are pending. Claims 51-55 are newly added. While Applicants have amended independent claims to further prosecution, Applicants reserve the right to file continuing applications directed to the claims as originally filed.

1. Claims 1-9, 11-14, 16-21, and 40-49 were rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US 2,839,651) or Uemura (JP 9-215605), in view of Guiles et al. (US 6,056,844) or Stark et al (US 2002/0113066 A1). In addition to the reasons outlined in the Response filed on April 5, 2006, Applicants respectfully traverse the rejections for the following reasons.

Claim 1 is directed to a heating belt including a flexible support and a composite material coated on the flexible support. The flexible support includes material from the group consisting of polymer fibers, graphite fibers, ceramic fibers, and glass fibers. The composite material includes a polymer and inductively heatable particles. Claim 40 is directed to a system for heating an article. The system includes a heating belt similar to the heating belt of claim 1 and a field generator. Claim 45 is directed to a method for heating an article including placing an article in proximity to a heating belt similar to the heating belt of claim 1 and inducing a field about the heating belt.

The PTO appears to rely on Erickson or Uemura for disclosure of a heating belt. Erickson is directed to a belt conveyor system and to heating conveyor belts and such systems, and teaches use of load bearing metal cables to provide a structural backbone of the belt. Uemura is directed to a steel band belt extended in a movable state between drums and an induction heating coil set in a state that allows it to shift position in the direction of movement of the belt or across it. Neither Erickson nor Uemura disclose use of induction heatable particles and neither references teach a flexible support comprising a material selected from the group consisting of polymer fiber, graphite fibers, ceramic fibers, and glass fibers.

In an attempt to address the deficiencies of Erickson and Uemura, the PTO appears to turn to Guiles and Stark. Guiles and Stark teach polymer induction bonding technology and provide for heating of polymeric materials by mixing ferromagnetic particles in the polymer to be heated. However, Guiles and Stark fail to teach or suggest a flexible support comprising fibers as claimed. As such, Guiles and Stark fail to overcome the deficiencies of Erickson and Uemura.

For at least the foregoing reasons, claims 1-9, 11-14, 16-21, and 40-49 are patentable over Erickson or Uemura in view of Guiles or Stark. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 103(a) rejection.

2. Claims 10, 15, 34, 35, and 50 were rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson or Uemura in view of Guiles or Stark, as applied above and further in view of Kinouchi et al. (US 6,087,641). Applicants respectfully traverse this rejection.

Kinouchi discloses a fixing device having a fixing belt formed of a ferromagnetic metallic material. A separation layer for preventing adhesion of a developing agent (toner), for example a layer of fluoro-resin, silicone resin, or silicone rubber, may be coated on the surface of the fixing belt. Kinouchi fails to teach or suggest a flexible support including fibers as claimed, and as such, fails to overcome the deficiencies of the above combination. Accordingly, reconsideration and withdrawal of 35 U.S.C. 103(a) rejection in further view of Kinouchi is respectfully requested.

3. Claims 1-9, 11-14, 16-18, 40-42, and 45 were further rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda et al. (US 5, 752,148), in view of Guiles et al. or Stark et al. Applicants respectfully traverse this rejection.

Yoneda is directed to an electromagnetic induction heating type fixing device and method. A heating member can be a fixing belt arranged in a loop while the heater is an electromagnetic induction coil positioned substantially within the loop. In an embodiment, the fixing belt includes a web formed of carbon steel, stainless steel alloy, or nickel or the like, the surface of which is provided with a heat-release resistant type layer or heat resistant rubber layer. Yoneda fails to teach or suggest a composite material including inductively heatable particles and fails to teach or suggest a flexible support including materials selected from polymer fibers, glass fibers, ceramic fibers, and graphite fibers.

Accordingly, the PTO appears to turn to Guiles and Stark. The PTO asserts that it would have been obvious “to modify Yoneda to use inductively heatable particles with the polymer of the belt for better heating temperature control and more uniform heating results, in view of the teaching of Guiles or Stark.” However, Guiles and Stark fail to teach or remotely suggest a flexible support including a material selected from the group consisting of polymer fibers, graphite fibers, and glass fibers. As such, a suggested combination would be missing one or more of the elements of the claimed invention.

In addition, the combination is deficient for reasons similar to those outlined in previous Office Action Responses. If the PTO is suggesting by the term “modify” that the inductively heatable particles of Guiles or Stark be used as substitutes for the web of the fixing belt of Yoneda, such a combination would be missing a flexible support onto which the composite material is to be coated. On the other hand, there is no teaching or suggestion that adding the inductively heatable particles of Guile or Stark to the fixing belt of Yoneda would provide better heating temperature control and more uniform heating results.

As such, claims 1-9, 11-14, 16-18, 40-42, and 45 are patentable over Yoneda in view of Guiles or Stark. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 103(a) rejection.

4. Claims 10, 15, 34, 35, and 50 were further rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Guiles or Stark and in further view of Kinouchi. Applicants respectfully traverse this rejection.

As stated above, Kinouchi fails to teach or disclose a flexible support including a material selected from the group consisting of polymer fibers, graphite fibers, ceramic fibers, and glass fibers. As such, Kinouchi fails to overcome the deficiencies of the combination of Yoneda in view of Guiles or Stark. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejection.

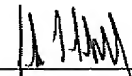
Applicants respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney or agent.

The Commissioner is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

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Date


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